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ABSTRACT

Students from 16 different vocational/technical areas of study in seven postsecondary complexes in Mississippi (representing a cross-section of all junior colleges in the State) were administered the Nelson-Denny Reading Test to identify reading levels. The FORCAST readability formula (Klare, 1974) was used to determine the readability level of each of the 230 textbooks used in the postsecondary vocational and technical courses. Results showed that the mean reading levels of all students varied from 1 to 4 grade levels from the mean readability levels of texts used in instructing them. All of the texts measured indicated reading levels above the 10.63 grade level. Overall, the vocational areas indicated a 1.57 larger discrepancy than the technical areas. The report presents and discusses data on the number of students, reading range, and mean reading grade level for each of the 16 different vocational/technical areas of study. It also lists title, bibliographic information, and mean readability level for every text used in each of the 16 areas: (1) Auto body and fender repair, (2) auto mechanics, (3) farm equipment, (4) heating, refrigeration, and air conditioning, (5) industrial electricity, (6) machine shop, (7) practical nursing, (8) radio and TV repair, (9) sheet metal, (10) welding, (11) cosmetology, (12) data processing, (13) distribution and marketing, (14) drafting and design, (15) electronics, (16) secretarial science. (HD)

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Vocational Reading Development Program

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Complexes in Mississippi

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Research Project in Vocational Education
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Vocational Education Division
Mississippi State Department of Education
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Bureau of Educational Research
University of Southern Mississippi
Hattiesburg, Mississippi

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VOCATIONAL READING DEVELOPMENT PROGRAM

COMPARISON OF THE READING COMPREHENSION LEVELS OF
THE POST-SECONDARY VOCATIONAL/TECHNICAL STUDENTS
WITH THE READABILITY LEVELS OF THE TEXTBOOKS
UTILIZED IN THE VOCATIONAL/TECHNICAL
COMPLEXES IN MISSISSIPPI

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A Research Project
Sponsored by
Vocational-Technical Division
Mississippi State Department of Education
and
University of Southern Mississippi

June, 1976

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CHAPTER I

INTRODUCTION

In junior college vocational/technical programs, basic education instructors, vocational and technical instructors, and some counselors find themselves involved in various phases of teaching reading. This varies from introducing and reinforcing specific reading skills to administering various types of reading tests. It is not difficult to justify the necessity of having an adequate grasp of basic reading skills. Whether a student is enrolled in a radio and television program, cosmetology program, practical nursing program, or any one of the other vocational/technical areas of study, good reading skills are vital to maximum success.

Reading instruction should not be confined to the reading class. Although the reading instructor teaches specific reading skills, the student must apply these to a specific vocational/technical area of study. Just as reading itself is not an isolated task occurring only at a specific time during a day, growth and development with this task is a part of every aspect of the student's day of instruction. This can be largely accomplished by making the essential content vocabulary of each vocational or technical area of study the core of total reading development.

The present study is a part of a larger study. The objectives of the total study included the following:

1. To identify reading levels of post-secondary students enrolled in 16 areas of vocational/technical education in selected junior colleges in Mississippi.
2. To determine the reading levels of textbooks utilized in 16 areas of vocational/technical education at the junior college level in selected junior colleges in Mississippi.
3. To survey the junior college reading and/or basic skills teachers as to the kinds of methods and materials employed with vocational/technical students.
4. To survey junior college vocational/technical teachers in the 16 vocational/technical areas as to their understanding in attacking basic reading problems.
5. To develop curriculum support materials for utilization in post-secondary vocational/technical courses.

Volume I investigates the first two of the above objectives by obtaining reading levels of vocational/technical students in the 16 areas of study as well as readability levels of texts employed in these areas. Volume II presents results of the reading teacher questionnaire used in accomplishing objective number three. Objective number four is met by a vocational/technical teacher questionnaire. Results of this are set forth in Volume III. Word lists developed in 13 areas of vocational and technical education were each developed under separate covers and include games and activities for reading skills.

Purpose of the Study

The purpose of this study was to determine the reading grade levels of students enrolled in the vocational/technical courses in post-secondary educational institutions in Mississippi and to determine the readability levels of textbooks employed in such programs.

Specific Objectives

Volume I includes the following specific objectives:

1. To identify reading levels of post-secondary students enrolled in 16 areas of vocational/technical education in selected junior colleges in Mississippi.
2. To determine the reading levels of textbooks utilized in 16 areas of vocational/technical education at the junior college level in selected junior colleges in Mississippi.

Procedure

Students from 16 different vocational/technical areas of study in 7 post-secondary complexes in Mississippi were administered a reading test during the fall of 1974; testing was arranged by vocational/technical directors. Although testing conditions in all situations were good, they were not commensurate.

The participating junior colleges represented a cross-section of all junior colleges in Mississippi. The following junior colleges participated in this study:

1. Copiah-Lincoln Junior College.
2. Hinds Junior College.
3. Holmes Junior College.
4. Jones County Junior College.
5. Northeast Mississippi Junior College.
6. Mississippi Gulf Coast Junior College - Jackson County Campus.
7. Mississippi Gulf Coast Junior College - Jeff Davis Campus.

The test used to determine reading levels of the vocational/technical students was the Nelson-Denny Reading Test, Form C. This instrument has many uses as a screening instrument; it is of particular value in screening students who need help with reading problems (Nelson and Denny, 1973).

Closely related to the screening uses of the Nelson-Denny are uses in intelligent decision-making at the post-secondary school level. For example, some courses demand better developed reading skills or different reading skills than others. Making the best possible choice of curriculum relies heavily on the student's reading abilities and reading habits. This test provides a score in vocabulary, comprehension and rate, and a total score. Each form contains 100 items to measure vocabulary and 36 to measure reading comprehension. The reading comprehension scores are reported in this study.

The FORCAST readability formula (Klare, 1974) was used to determine the readability level of each of the 230 textbooks

used in the post-secondary vocational and technical courses and utilized in this study. FORCAST is a readability formula developed by Caylor, Sticht, Fox, and Ford in 1973, in an extensive study of the reading requirements of military related materials. The FORCAST formula is as follows:

$$\text{FORCAST RGL} = 20 - \frac{\text{number of one-syllable words}}{10}$$

This formula was computerized by utilizing the FORTRAN language on the Xerox Sigma 9. This program calculated both raw scores and grade equivalents. Three passages from each textbook were selected and punched on IBM cards. The respective texts were provided by the vocational/technical centers at the junior colleges included in this study.

CHAPTER II

PRESENTATION AND ANALYSIS OF DATA

The data were analyzed within 16 vocational/technical areas of study at the post-secondary level for the reading comprehension levels of students in each area and the readability levels of the respective texts in these areas. The following material is divided according to vocational areas and technical areas of instruction.

VOCATIONAL AREAS

TABLE 1
READING LEVELS OF STUDENTS IN
AUTO BODY AND FENDER REPAIR

No. of Students	Reading Range	Mean
29	6.0 - 13.5	8.72

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
Auto Body Repairing and Repainting. Bill Toboldt. Homewood, Illinois: The Goodheart-Willcox Co., Inc., 1969.	13.46
Automotive Collision Work, 3rd Edition. Ernest Venk, Edward D. Spicer, and Ewart J. Davies. Chicago: American Technical Society, 1964.	13.63

TABLE 2
READABILITY LEVELS OF BOOKS IN
AUTO BODY AND FENDER REPAIR

No. of Books	Readability Range	Mean
2	13.46 - 13.63	13.55

Reading levels of students in the Auto Body and Fender Repair vocational area span a 7 year, 5 month range. With the readability of texts used in instruction falling at a first-year college level, only those students at the ceiling of this 6.0 - 13.5 reading range have reading levels that would seem appropriate for use of these texts.

TABLE 3
READING LEVELS OF STUDENTS IN
AUTO MECHANICS

No. of Students	Reading Range	Mean
126	6.0 - 15.0	8.57

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Auto Mechanics Fundamentals</u> , Martin W. Stockel. South Holland, Illinois: The Goodheart-Willcox Co., Inc., 1974.	13.33
<u>Auto Service and Repair</u> , Martin W. Stockel. South Holland, Illinois: The Goodheart-Willcox Co., Inc., 1969.	13.13
<u>Automotive Air Conditioning</u> , Boyce H. Dwiggins. Albany: Delmar Publishers, Inc., 1967.	12.73
<u>Automotive Drawing Interpretation</u> , Louis E. Jensen. Albany: Delmar Publishers, Inc., 1962.	12.23
<u>Automotive Electrical Equipment</u> , 7th Edition. William H. Crouse. New York: McGraw-Hill Book Company, 1971.	13.80
<u>Automotive Encyclopedia</u> , William K. Toboldt and Larry Johnson, Eds. South Holland, Illinois: The Goodheart-Willcox Co., Inc., 1972.	12.36
<u>Automotive Mechanics</u> , 7th Edition. William H. Crouse. New York: McGraw-Hill Book Company, 1975.	12.36
<u>Automotive Technology</u> , Frederick C. Nash. New York: McGraw-Hill Ryerson, Limited, 1973.	13.00
<u>Basic Mathematics Simplified</u> , 3rd Edition. C. Thomas Olivo and Thomas P. Olivo. Albany: Delmar Publishers, Inc., 1972.	13.13
<u>Motor Auto Repair Manual</u> , 37th Edition. Louis C. Forier, Ed. New York: Motor, 1973.	14.43

<u>Textbook</u>	<u>Mean Readability Level</u>
National Service Data, 1974 Final. San Diego: Mitchell Manuals, Inc.	14.70
Practical Problems in Mathematics for Automotive Technicians. Boyce H. Dwiggins. Albany: Delmar Publishers, Inc., 1972.	12.26

TABLE 4
READABILITY LEVELS OF BOOKS IN
AUTO MECHANICS

No. of Books	Readability Range	Mean
12	12.23 - 14.70	13.12

The mean readability level of the 12 books used in the Auto Mechanics vocational area falls at a first-year college level. None of the texts has a readability level lower than the twelfth grade. With students whose reading levels range from 6.0 - 15.0, their average reading level is lower than the readability level of the texts.

TABLE 5
READING LEVELS OF STUDENTS IN
FARM EQUIPMENT

No. of Students	Reading Range	Mean
11	6.0 - 15.0	9.99

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Farm Power and Machinery Management,</u> <u>Laboratory Manual and Workbook,</u> 6th Edition. Donnell Hunt. Ames, Iowa: Iowa State University Press, 1973.	13.53
<u>Farm Tractor Maintenance, 3rd Edition.</u> Arlen D. Brown and Ivan G. Morrison Danville, Illinois: The Interstate Printers & Publishers, Inc., 1962.	13.16
<u>Hydraulic Systems for Tractors and Other</u> <u>Mobile Equipment, Care and Operation,</u> Vol. 1. J. Howard Turner, Ed. Athens, Georgia: American Association for Vocational Instructional Materials, 1974.	13.43
<u>Machines for Power Farming, 2nd Edition.</u> Archie A. Stone and Harold E. Gulvin. New York: John Wiley and Sons, Inc., 1967.	13.56
<u>Tractor Fuels and Lubricants, Selecting</u> <u>and Storing.</u> American Association for Agricultural Engineering and Vocational Agriculture, 1970.	13.30

TABLE 6
READABILITY LEVELS OF BOOKS IN
FARM EQUIPMENT

No. of Books	Readability Range	Mean
5	13.16 - 13.56	13.40

All of the instructional texts in Farm Equipment have readability levels at the first year of college. With a mean reading level of ninth grade, ninth month for the students in this field of study, it is apparent that a significant number of students fall within the range represented by the basal student reading level of 6.6 up to approximately the ninth grade. The difference between the reading levels of these students and the 13.40 mean readability level for the instructional texts is markedly significant.

TABLE 7

READING LEVELS OF STUDENTS IN
HEATING, REFRIGERATION, AND AIR CONDITIONING

No. of Students	Reading Range	Mean
112	6.0 - 15.0	9.25

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
Blueprint Reading for Industry. Walter C. Brown. South Holland, Illinois: The Goodheart-Willcox Co., Inc., 1972.	13.23
Electric Controls for Refrigeration and Air Conditioning. B. C. Langley. Englewood Cliffs: Prentice-Hall, Inc., 1974.	13.73

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Laboratory Manual - Refrigeration Servicing.</u> Paul F. Goliber. Albany: Delmar Publishers, Inc.	13.46
<u>Modern Refrigeration and Air Conditioning: Theory, Practice of Refrigeration and Air Conditioning Systems.</u> Andrew D. Althouse, Carl H. Turnquist, and Alfred F. Bracciano. Homewood, Illinois: The Goodheart-Willcox Co., Inc., 1968.	13.00
<u>Principles of Air Conditioning.</u> V. Paul Lang. Albany: Delmar Publishers, Inc., 1972.	12.06
<u>Principles of Refrigeration.</u> R. Warren Marsh and C. Thomas Olivo. Albany: Delmar Publishers, Inc., 1966.	13.06
<u>Psychology: Human Relations and Motivation, 4th Edition.</u> Donald A. Laird and Eleanor Laird. New York: McGraw-Hill Book Company, 1967.	13.56

TABLE 8

READABILITY LEVELS OF BOOKS IN
HEATING, REFRIGERATION, AND AIR CONDITIONING

No. of Books	Readability Range	Mean
7	12.06 - 13.73	13.16

The difference between the mean reading level of the 112 Heating, Refrigeration, and Air Conditioning students and the mean readability level of the instructional texts is approximately 4 grade levels. None of the texts has a readability

level below the twelfth grade. However, the reading levels of the students range from 6.0 - 15.0.

TABLE 9
READING LEVELS OF STUDENTS IN
INDUSTRIAL ELECTRICITY

No. of Students	Reading Range	Mean
8	6.0 - 13.2	10.30

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Alternating Current Fundamentals.</u> John R. Duff. Albany: Delmar Publishers, Inc.	12.90
<u>Direct Current Fundamentals.</u> Orla E. Loper. Albany: Delmar Publishers, Inc.	11.66
<u>Electrical Construction Wiring.</u> Walter N. Alerich. Chicago: American Technical Society, 1971.	13.13
<u>Electrical Wiring Residential.</u> Ray C. Mullin. Albany: Delmar Publishers, Inc., 1973.	13.86
<u>Electricity I: Devices, Circuits, Materials.</u> Thomas S. Kubala. Albany: Delmar Publishers, Inc., 1974.	13.96

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Electricity II: Devices, Circuits, Materials. Thomas S. Kubala. Albany: Delmar Publishers, Inc., 1974.</u>	12.66
<u>Electricity III: Motors, Generators, Controls. Albany: Delmar Publishers, Inc., 1974.</u>	13.96
<u>Electricity IV: Related Information. Albany: Delmar Publishers, Inc., 1974.</u>	13.16
<u>National Electrical Code, 1975 Edition. Boston: National Fire Protection Association, 1974.</u>	12.96
<u>National Electrical Code and Blueprint Reading. Kenneth L. Gebert. Chicago: American Technical Society, 1972.</u>	13.03

TABLE 10
READABILITY LEVELS OF BOOKS IN
INDUSTRIAL ELECTRICITY

<u>No. of Books</u>	<u>Readability Range</u>	<u>Mean</u>
10	11.66 - 13.96	13.13

With a 6.0 - 13.2 reading level range for Industrial Electricity students included in this study, the mean readability level of the books is 13.13. The 10 books used for instruction do not have a readability level below 11.66. Thus, it would appear that a large percentage of the students have reading levels lower than the readability level of the texts.

TABLE 11
READING LEVELS OF STUDENTS IN
MACHINE SHOP

No. of Students	Reading Range	Mean
63	6.0 - 15.0	9.33

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Blueprint Reading for Machinists, Intermediate.</u> Delmar Publishers, Inc., 1971.	13.60
<u>General-Industrial Machine Shop, Revised.</u> Harold V. Johnson. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1970.	12.66
<u>How to Run a Lathe, Revised.</u> South Bend, Indiana: South Bend Lathe, 1966.	12.03
<u>Machine Shop Mathematics, 2nd Edition.</u> Aaron Axelrod. New York: McGraw-Hill Book Company, 1951.	12.00
<u>Machine Shop Operations and Setups, 3rd Edition.</u> Harold W. Porter, Orville D. Lascoe, and Clyde A. Nelson. Chicago: American Technical Society, 1971.	13.06
<u>Machine Tool Metalworking: Principles and Practice.</u> John L. Felrer and Earl E. Tatro. New York: McGraw-Hill Book Company.	12.40

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Machine Tool Operation, Part II.</u> Henry D. Burghardt, Aaron Axelrod, and James Anderson. New York: McGraw-Hill Book Company, 1960.	11.93
<u>Machine Trades Blueprint Reading.</u> Russel W. Ihne and Walter E. Streeter. Chicago: American Technical Society.	12.60
<u>Shop Theory, 5th Edition.</u> James Anderson and Earl E. Tatro.	12.76
<u>Technology of Machine Tools.</u> S. F. Krar, J. W. Oswald, and J. E. St. Amand. Toronto: McGraw-Hill Company of Canada Limited, 1969.	14.00

TABLE 12
READABILITY LEVELS OF BOOKS IN
MACHINE SHOP

<u>No. of Books</u>	<u>Readability Range</u>	<u>Mean</u>
10	11.93 - 14.00	12.70

The readability levels of books in the vocational area of Machine Shop are approximately 3 years and 4 months above the mean reading level of the students enrolled in that area. The 9.33 mean reading level is also approximately 2 years and 6 months below the basal readability level of the texts. Of the 10 books employed in instruction, all are at or above the eleventh grade level.

TABLE 13
 READING LEVELS OF STUDENTS IN
 PRACTICAL NURSING

No. of Students	Reading Range	Mean
120	6.0 - 15.0	10.16

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>A Brief Introduction to General, Organic and Biochemistry.</u> Joseph I. Routh, Darrell P. Eyman, and Donald J. Burton. Philadelphia: W. B. Saunders Company, 1971.	14.13
<u>Abdallah's Nurse's Aide Study Manual,</u> 2nd Edition. Mary E. Mayes, Philadelphia: W. B. Saunders Company, 1970.	13.46
<u>Basic Nutrition in Health and Disease Including Selection and Care of Food.</u> Phyllis Sullivan Howe. Philadelphia: W. B. Saunders Company, 1971.	13.20
<u>Basic Psychiatric Nursing.</u> Susan Irving. Philadelphia: W. B. Saunders Company, 1973.	12.16
<u>Diagnostic Microbiology: A Textbook for the Isolation and Identification of Pathogenic Microorganisms,</u> 4th Edition. W. Robert Bailey and Elvyn G. Scott. St. Louis: The C. V. Mosby Company, 1974.	13.93

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>The Dynamics of Health Care</u> , 2nd Edition. Ruth M. French. New York: McGraw-Hill Book Company, 1974.	13.80
<u>Essentials of Nursing: A Medical-Surgical Text for Practical Nurses</u> , 3rd Edition. Claire Brackman Keane. Philadelphia: W. B. Saunders Company, 1974.	12.93
<u>First Aid Textbook</u> , 4th Edition. The American National Red Cross for the Instruction of First Aid Classes. Garden City, New York: Doubleday and Company, Inc., 1966.	12.46
<u>Fundamentals of Clinical Chemistry</u> . Norbert W. Tietz, Ed. Philadelphia: W. B. Saunders Company, 1970.	14.90
<u>Fundamentals of Respiratory Therapy</u> , 2nd Edition. Donald F. Egan. St. Louis: The C. V. Mosby Company, 1973.	14.06
<u>Geriatric Nursing for Practical Nurses</u> , 2nd Edition. Marion Keith Stevens. Philadelphia: W. B. Saunders Company, 1975.	12.73
<u>Health for Effective Living: A Basic Health Science (Health Education) Text for College Students</u> , 5th Edition. New York: McGraw-Hill Book Company, 1970.	12.80
<u>Healthful Living: A Textbook of Personal and Community Health</u> , 9th Edition. Harold S. Diehl and Willard Dalrymple. New York: McGraw-Hill Book Company, 1973.	12.36
<u>Home Nursing Textbook</u> , 7th Edition. Nursing Services, American Red Cross. New York: Doubleday and Company, Inc., 1963.	13.16
<u>Introduction to Respiratory Therapy</u> , 2nd Edition. Steve Grenard, Gustav J. Beck, and George W. Rich. Monsey, New York: Glenn Educational Medical Services, Inc., 1971.	13.13

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Maternity Nursing: A Textbook for Practical Nurses, 3rd Edition. Inge J. Bleier. Philadelphia: W. B. Saunders Company, 1971.</u>	13.76
<u>The Medical Assistant: A Guide to Clinical, Secretarial, and Technical Duties, 3rd Edition. Miriam Bredow and Marian G. Cooper. New York: McGraw-Hill Book Company, 1970.</u>	13.16
<u>Medical Assistants, 2nd Edition. M. Murray Lawton and Donald F. Foy. St. Louis: The C. V. Mosby Company, 1971.</u>	13.00
<u>Medical Office Procedures. Miriam Bredow. New York: McGraw-Hill Book Company, 1973.</u>	13.03
<u>Medical Record Management, 6th Edition. Edna K. Huffman. Berwyn, Illinois: Physicians' Record Company, 1972.</u>	14.00
<u>Medical Secretarial Procedures, 5th Edition. Miriam Bredow. New York: McGraw-Hill Book Company, 1971.</u>	13.10
<u>Mental Health and Human Behavior, 3rd Edition. William S. Keezer. Dubuque, Iowa: Wm. C. Brown Company Publishers, 1971.</u>	13.63
<u>Modern Bedside Nursing, 8th Edition. Philadelphia: W. B. Saunders Company, 1974.</u>	12.90
<u>Nursing Skills for Allied Health Services, Volume 1. Lucile A. Wood, Ed. Philadelphia: W. B. Saunders Company.</u>	11.36
<u>Nursing Skills for Allied Health Services, Volume 2. Lucile A. Wood, Ed. Philadelphia: W. B. Saunders Company.</u>	13.66
<u>Nursing Skills for Allied Health Services, Volume 3. Lucile A. Wood, Ed. Philadelphia: W. B. Saunders Company.</u>	12.56

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Nutrition and Physical Fitness, 9th Edition.</u> L. Jean Bogert, George M. Briggs, and Doris Howes Calloway. Philadelphia: W. B. Saunders Company, 1973.	12.53
<u>Pediatrics for Practical Nurses, 2nd Edition.</u> Eleanor Dumont Thompson. Philadelphia: W. B. Saunders Company, 1970.	12.83
<u>Personal and Vocational Relationships in Practical Nursing, 3rd Edition.</u> Carmen F. Ross. Philadelphia: J. B. Lippincott Company, 1969.	12.23
<u>Pharmacology for Practical Nurses, 3rd Edition.</u> Mary Kaye Asperheim. Philadelphia: W. B. Saunders Company, 1971.	14.20
<u>Practical Nurse Nutrition Education, 3rd Edition.</u> Alberta Dent Shackelton. Philadelphia: W. B. Saunders Company, 1972.	13.13
<u>The Principles and Practice of Blood Grouping.</u> Addine G. Erskine. St. Louis: The C. V. Mosby Company, 1973.	12.26
<u>Psychiatric Nursing: A Basic Manual, 3rd Edition.</u> Annie Laurie Crawford and Barbara Boring Buchanan. Philadelphia: F. A. Davis Company, 1970.	14.30
<u>Textbook of Basic Nursing.</u> Ella M. Thompson and Constance Murphy. Philadelphia: J. B. Lippincott Company, 1966.	12.40
<u>Textbook of Basic Nursing, 2nd Edition.</u> Ella M. Thompson and Caroline Bunker Rosdahl. Philadelphia: J. B. Lippincott Company, 1973.	12.53
<u>Textbook for Laboratory Assistants.</u> Irwin A. Oppenheim. St. Louis: The C. V. Mosby Company, 1972.	14.50

TABLE 14
 READABILITY LEVELS OF BOOKS IN
 PRACTICAL NURSING

No. of Books	Readability Range	Mean
36	11.36 - 14.90	12.81

The 36 texts of instruction spread throughout the vocational area of Practical Nursing represent the greatest number of texts used in the 16 vocational/technical areas of the study. The readability range spans approximately 3½ years with a basal readability level of 11.36 and a ceiling level of 14.90. The reading range of the 120 students runs from 6.0 to 15.0. Thus, although the ceiling for both the reading range of the students and the readability range of the books is fairly commensurate, none of the books has a readability level matching the students in the 6.0 - 11.36 grade level range. Also, the mean reading level of 10.16 is slightly 2½ years lower than the 12.81 mean readability level of the books.

TABLE 15
 READING LEVELS OF STUDENTS IN
 RADIO AND T.V. REPAIR

No. of Students	Reading Range	Mean
25	6.3 - 15.0	9.74

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Basic Television, Principles and Servicing, 3rd Edition.</u> Bernard Grob. New York: McGraw-Hill Book Company, 1964.	13.76
<u>Basic Television, Principles and Servicing, 4th Edition.</u> Bernard Grob. New York: McGraw-Hill Book Company, 1975.	13.86
<u>Basic Television: Theory and Servicing, A Text-Lab Manual, 2nd Edition.</u> Paul B. Zbar and Peter W. Orne. New York: McGraw-Hill Book Company, 1971.	12.53
<u>Electronic Communication, 2nd Edition.</u> Robert L. Shrader. New York: McGraw-Hill Book Company, 1967.	14.06
<u>Elements of Radio.</u> Abraham Marcus and William Marcus. Englewood Cliffs: Prentice-Hall, Inc., 1973.	12.43
<u>Elements of Radio Servicing, 3rd Edition.</u> William Marcus and Alex Levy. New York: McGraw-Hill Book Company, 1967.	13.30
<u>Elements of Television Servicing for Bench and Field.</u> Abraham Marcus and Samuel E. Gendler. Englewood Cliffs: Prentice-Hall, Inc., 1963.	12.60
<u>Study Guide for CET Examinations.</u> J. A. Wilson and Dick Glass. Indianapolis: Howard W. Sams and Company, 1971.	13.33

TABLE 16
 READABILITY LEVELS OF BOOKS IN
 RADIO AND T.V. REPAIR

No. of Books	Readability Range	Mean
8	12.43 - 14.06	13.23

All of the texts employed in instruction in this vocational area are a minimum of approximately 2½ grade levels above the 9.74 mean reading levels of the students. Thus, the reading range of 6.3 - 15.0 suggests that a significant percentage of the 25 students in the program do not have a reading level appropriate to success with books that have a mean readability level of 13.23.

TABLE 17
 READING LEVELS OF STUDENTS IN
 SHEET METAL

No. of Students	Reading Range	Mean
12	6.0 - 14.4	10.08

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Air Conditioning Metal Layout.</u> Joseph J. Kaberlein. New York: The Bruce Publishing Company, 1967.	11.83
<u>Hand Processes: Suggested Unit Course.</u> Albany: Delmar Publishers, Inc.	12.23
<u>Machine Processes: Suggested Unit Course.</u> Albany: Delmar Publishers, Inc.	11.33
<u>Mathematical Formulas Applied to Sheet-Metal Work.</u> Joseph J. Kaberlein. New York: The Bruce Publishing Company, 1966.	12.06
<u>Mathematics for the Sheet Metal Technician, Part I.</u> Claude J. Zinngrabe. Chicago: American Technical Society.	12.83
<u>Mathematics for the Sheet Metal Technician, Part II.</u> Claude J. Zinngrabe. Chicago: American Technical Society.	11.80
<u>Measurement and Layout: Suggested Unit Course.</u> Albany: Delmar Publishers, Inc.	12.26
<u>Sheet Metal Layout.</u> Leo A. Meyer. New York: McGraw-Hill Book Company, 1961.	13.16
<u>Short Cuts for Round Layouts.</u> Joseph J. Kaberlein. New York: The Bruce Publishing Company, 1966.	12.00

TABLE 18

READABILITY LEVELS OF BOOKS IN
SHEET METAL

<u>No. of Books</u>	<u>Readability Range</u>	<u>Mean</u>
9	11.33 - 13.16	12.17

The small group of students included in the vocational area of Sheet Metal has a mean reading level of 10.08. The mean readability level of the texts used in instruction is 12.17. This 2 grade level difference could suggest a significant percentage of students who demonstrate marked difficulty functioning in the reading process with these particular texts. None of the 9 books has a readability level below the eleventh grade. Yet, some of the 12 students have reading levels that fall at the sixth grade level.

TABLE 19
READING LEVELS OF STUDENTS IN
WELDING

No. of Students	Reading Range	Mean
57	6.0 - 15.0	9.18

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
Basic Mathematics Simplified, Revised. C. Thomas Olivo. Albany: Delmar Publishers, Inc., 1963	12.76
Blueprint Reading for Welders. A. E. Bennett and Louis J. Sly. Albany: Delmar Publishers, Inc., 1973.	12.70

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Modern Welding.</u> Andrew D. Althouse, Carl H. Turnquist, and William A. Bowditch. South Holland, Illinois: The Goodheart-Willcox Co., Inc., 1970.	14.16
<u>Training in Shielded Metal-Arc Welding I.</u> Troy, Ohio: Hobart School of Welding Technology.	13.33
<u>Welding Skills and Practices.</u> J. W. Giachino, William Weeks, and Elmer Brune. Chicago: American Technical Society, 1971.	12.76

TABLE 20
READABILITY LEVELS OF BOOKS IN
WELDING

No. of Books	Readability Range	Mean
5	12.70 - 14.16	13.14

The mean reading level of students in the Welding area of study is approximately $3\frac{1}{2}$ grade levels lower than the lowest readability level of any of the books employed in instruction. The mean reading level of the students is 4 grade levels below the mean readability level of these books. With students demonstrating reading levels ranging from 6.0 - 15.0, it appears that a significant percentage of the 57 students have reading levels inappropriate for the instructional texts.

TECHNICAL AREAS

TABLE 21
READING LEVELS OF STUDENTS IN
COSMETOLOGY

No. of Students	Reading Range	Mean
24	6.0 - 13.8	10.27

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Chemistry for Cosmetology Students:</u> <u>A Programmed Text.</u> J. Norman Swaton, Jr. Downey, California: Intron, Inc., 1969.	13.46
<u>Standard Textbook of Cosmetology, Revised.</u> <u>Constance V. Kibbe.</u> Bronx, New York: Milady Publishing Corporation, 1972.	13.16

TABLE 22
READABILITY LEVELS OF BOOKS IN
COSMETOLOGY

No. of Books	Readability Range	Mean
2	13.16 - 13.46	13.31

Neither of the texts employed in instruction in the technical area of Cosmetology is commensurate with approximately one-half of the students' reading levels. The 10.27 mean reading level of the total group of students is 3 grade levels lower than the 13.31 mean readability level of these texts.

TABLE 23
READING LEVELS OF STUDENTS IN
DATA PROCESSING

No. of Students	Reading Range	Mean
66	6.3 - 15.0	11.74

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Basic FORTRAN IV Programming, Revised.</u> Donald H. Ford. Homewood, Illinois: Richard D. Irwin, Inc., 1974.	13.66
<u>Business Data Processing and Computer Programming.</u> Mike Murach. Chicago: Science Research Associates, Inc., 1973.	13.70
<u>COBOL Programming.</u> Nancy B. Stern and Robert A. Stern. New York: John Wiley and Sons, Inc., 1970.	14.00
<u>Computer Programming FORTRAN IV.</u> Decima M. Anderson. New York: Appleton-Century-Crofts, 1966.	13.93

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Data Processing for Business.</u> Gerald A. Silver and Joan B. Silver. New York: Harcourt Brace Jovanovich, Inc., 1973.	13.83
<u>Flowcharting Techniques.</u> Marilyn Bohl. Chicago: Science Research Associates, Inc., 1971.	14.73
<u>IBM System/3 Subset American National Standard COBOL Reference Manual, 2nd Edition.</u> International Business Machines Corporation, 1973.	13.83
<u>Introduction to Business and Economic Statistics, 3rd Edition.</u> Cincinnati: South-Western Publishing Company, 1966.	12.86
<u>Introduction to Electronic Computers,</u> 2nd Edition. Gordon S. Davis. New York: McGraw-Hill Book Company, 1971.	13.70
<u>Keypunch Training Course, 3rd Edition.</u> William E. Bux. Cincinnati: South- Western Publishing Company, 1975.	13.56
<u>Principles of Business Data Processing,</u> 2nd Edition. V. Thomas Dock and Edward Essick. Chicago: Science Research Associates, Inc., 1974.	13.60
<u>RPG: Report Program Generator.</u> Joyce Currie Little. Englewood Cliffs: Prentice-Hall, Inc., 1971.	13.73
<u>Standard COBOL: A Problem-Solving Approach.</u> Marilyn Z. Smith. Boston: Houghton Mifflin Company, 1974.	13.16
<u>Systems Analysis.</u> Alan Daniels and Donald Yeates, Eds. Palo Alto, California: Science Research Associates, Inc., 1971.	13.23
<u>Systems and Procedures for Business Data Processing, 2nd Edition.</u> Clarence B. Randall and Sally Weimer Burgly. Cincinnati: South-Western Publishing Company, 1968.	13.16

TABLE 24
 READABILITY LEVELS OF BOOKS IN
 DATA PROCESSING

No. of Books	Readability Range	Mean
15	12.86 - 14.73	13.65

The reading level range of Data Processing students covering over 9 grade levels strongly contrasts with the rather constricted readability level range of not quite 2 grade levels for the 15 texts employed in instruction. The basal 12.86 readability level suggests that a significant number of the 66 students have markedly lower reading levels.

TABLE 25
 READING LEVELS OF STUDENTS IN
 DISTRIBUTION AND MARKETING

No. of Students	Reading Range	Mean
52	6.0 - 14.7	11.30

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Advertising - Creative Communication with Consumers.</u> Harry Walker Hepner. New York: McGraw-Hill Book Company, 1969.	13.60
<u>Advertising and Displaying Merchandise.</u> Harland E. Samson. Cincinnati: South-Western Publishing Company, 1967.	13.30
<u>Advertising Procedure, 6th Edition.</u> Otto Kleppner. Englewood Cliffs: Prentice-Hall, Inc., 1973.	13.83
<u>Advertising Techniques and Management, Revised.</u> Robert Vincent Zacher. Homewood, Illinois: Richard D. Irwin, Inc., 1967.	13.46
<u>Basic Marketing: A Managerial Approach, 4th Edition.</u> E. Jerome McCarthy. Homewood, Illinois: Richard D. Irwin, Inc., 1971.	12.93
<u>Business: Its Nature and Environment, 7th Edition.</u> Raymond E. Glos and Harold A. Baker. Cincinnati: South-Western Publishing Company, 1972.	13.00
<u>Business Law, 9th Edition.</u> Ronald A. Anderson and Walter A. Kumpf. Cincinnati: South-Western Publishing Company, 1972.	12.00
<u>Business Mathematics for Colleges, 5th Edition.</u> Louis A. Rice, Alfred C. Boyd, and P. Blair Mayne. Cincinnati: South-Western Publishing Company, 1966.	12.80
<u>College Salesmanship.</u> Robert E. Hampton and James Barton Zabin. New York: McGraw-Hill Book Company, 1970.	13.43
<u>Communicating through Letters and Reports, 5th Edition.</u> J. H. Menning and C. W. Wilkinson. Homewood, Illinois: Richard D. Irwin, Inc., 1972.	13.03

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Economics: Principles, Problems, and Policies, 6th Edition.</u> Campbell R. McConnell. New York: McGraw-Hill Book Company, 1975.	13.86
<u>Essentials of Marketing Management,</u> Joe Kent Kerby. Cincinnati: South- Western Publishing Company, 1970.	13.66
<u>The Fashion Buyer's Job.</u> Beatrice Judelle. New York: National Retail Merchants Association, 1971.	12.53
<u>Financing Business Firms, 4th Edition.</u> Charles L. Prather and James E. Wert. Homewood, Illinois: Richard D. Irwin, Inc., 1971.	12.30
<u>Introductory Economics.</u> Ronald A. Wykstra. New York: Harper and Row, Publishers, 1971.	14.63
<u>Management in the Modern Organization.</u> Theo Haimann and William G. Scott. Boston: Houghton Mifflin Company, 1970.	13.80
<u>Management and Organization, 2nd Edition.</u> Henry L. Sisk. Cincinnati: South-Western Publishing Company, 1973.	12.86
<u>Marketing and Distribution: An Overview.</u> Daniel S. Warner. New York: McGraw-Hill Book Company, 1969.	14.50
<u>Marketing Principles and Market Action.</u> New York: McGraw-Hill Book Company, 1969.	13.00
<u>Marketing Today: A Basic Approach,</u> David J. Schwartz. New York: Harcourt Brace Jovanovich, Inc., 1973.	13.16
<u>Personnel Management, 4th Edition.</u> Herbert J. Chruden and Arthur W. Sherman, Jr. Cincinnati: South- Western Publishing Company, 1972.	13.13

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Principles of Management: An Analysis of Managerial Functions.</u> Koontz and O'Donnell. New York: McGraw-Hill Book Company, 1972.	13.93
<u>Retail Business Management.</u> Karen R. Gillespie and Joseph C. Hecht. New York: McGraw Hill Book Company, 1970.	14.23
<u>Sales Management; Decisions, Policies, and Cases, 2nd Edition.</u> Richard R. Still and Edward W. Cundiff. Englewood Cliffs: Prentice-Hall, Inc., 1969.	14.23
<u>Salesmanship, 5th Edition.</u> Charles Atkinson Kirkpatrick. Cincinnati: South-Western Publishing Company, 1971.	13.40
<u>The Technician Writes: A Guide to Basic Technical Writing.</u> Arnold B. Sklare. Boyd and Fraser Publishing Co., 1971.	14.13
<u>What Every Supervisor Should Know, 3rd Edition.</u> Lester R. Bittel. New York: McGraw-Hill Book Company, 1974.	13.16

TABLE 26

READABILITY LEVELS OF BOOKS IN
DISTRIBUTION AND MARKETING

<u>No. of Books</u>	<u>Readability Range</u>	<u>Mean</u>
27	12.00 - 14.63	13.40

The basal grade level of the readability range of books employed in instruction in the Distribution and Marketing area of instruction is approximately one-half year higher than the

mean of the reading levels of the students. Of 27 books used by the various instructors, not one has a readability level below twelfth grade. Yet, the students in this area have reading levels ranging from 6.0 - 14.7.

TABLE 27
READING LEVELS OF STUDENTS IN
DRAFTING AND DESIGN

No. of Students	Reading Range	Mean
88	6.0 - 15.0	11.77

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Architectural Drafting: Functional Planning and Creative Design.</u> George K. Stegman and Harry J. Stegman. Chicago: American Technical Society, 1966.	13.43
<u>Architecture: Design, Engineering, Drawing.</u> William P. Spence. Bloomington, Illinois: McKnight and McKnight Publishing Company, 1967.	13.00
<u>Architecture: Drafting and Design.</u> Donald E. Hepler and Paul I. Wallach. New York: McGraw-Hill Book Company, 1965.	13.50

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Building Construction Estimating</u> , 2nd Edition. Alonzo Wass. Englewood Cliffs: Prentice-Hall, Inc., 1970.	12.03
<u>Contracts, Specification, and Law for Engineers</u> , 2nd Edition. Clarence W. Dunham and Robert D. Young. New York: McGraw-Hill Book Company, 1971.	13.50
<u>Descriptive Geometry</u> , 4th Edition. E. G. Pare, R. O. Loving, and I. L. Hill. New York: Macmillan Company, 1971.	11.63
<u>Elementary Algebra: Structure and Use</u> , Raymond A. Barnett. New York: McGraw- Hill Book Company, 1968.	13.70
<u>Elementary Plane Surveying</u> , 4th Edition, Raymond E. Davis and Joe W. Kelly, New York: McGraw-Hill Book Company, 1969.	12.10
<u>Elementary Structural Design</u> . Charles O. Harris. Chicago: American Technical Society, 1951.	11.43
<u>Elements of Topographic Drawing</u> , 2nd Edition. Roscoe C. Sloane and John M. Montz. New York: McGraw-Hill Book Company, 1943.	13.66
<u>Engineering Drawing and Graphic Technology</u> , 11th Edition. Thomas E. French and Charles J. Vierck. New York: McGraw-Hill Book Company, 1972.	13.60
<u>Engineering Graphics</u> . 2nd Edition. Frederick E. Glesecke, Alva Mitchell, Henry C. Spencer, Ivan L. Hill, and Robert O. Loving. New York: Macmillan Publishing Co., Inc.	12.23
<u>Estimating for the Building Trades</u> . Joseph Steinberg and Martin Stempel. Chicago: American Technical Society, 1965.	13.30

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Fundamentals of Pipe Drafting.</u> Charles H. Thompson. New York: John Wiley and Sons, Inc., 1958.	13.70
<u>General Architectural Drawing.</u> William E. Wyatt. Peoria, Illinois: Chas. A. Bennett Co., Inc., 1969.	13.60
<u>Industrial Safety, 3rd Edition.</u> Roland P. Blake, Ed. Englewood Cliffs: Prentice-Hall, Inc., 1963.	12.93
<u>Introduction to Steel Shipbuilding,</u> <u>2nd Edition.</u> Elijah Baker, III. New York: McGraw-Hill Book Company.	11.76
<u>Manual of Steel Construction, 7th</u> <u>Edition.</u> New York: American Institute of Steel Construction, Inc., 1970.	13.06
<u>Materials of Construction, 2nd Edition.</u> R. C. Smith. New York: McGraw-Hill Book Company, 1973.	12.83
<u>Plane Trigonometry with Tables, 4th</u> <u>Edition.</u> Gordon Fuller. New York: McGraw-Hill Book Company, 1972.	13.26
<u>Principles of Cartography.</u> Erwin Raisz. New York: McGraw-Hill Book Company, 1962.	11.93
<u>The Principles and Practice of</u> <u>Surveying: Volume I. Elementary</u> <u>Surveying.</u> Charles B. Breed and George L. Hosmer. New York: John Wiley and Sons, Inc., 1970.	12.83
<u>Reading Architectural Working Drawings.</u> Edward J. Muller. Englewood Cliffs: Prentice-Hall, Inc., 1971.	12.66
<u>Strength of Materials, 3rd Edition.</u> Charles O. Harris. Chicago: American Technical Society, 1971.	11.33

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Structural Detailing for Technicians</u> , Gerald L. Weaver. New York: McGraw- Hill Book Company, 1974.	13.46
<u>Structural Steel Detailing</u> , New York: American Institute of Steel Construction.	12.83
<u>Surveying: An Introduction to Engineering Measurements</u> . Adrian R. Legault, Howard M. McMaster, and Ralph R. Marlette. Englewood Cliffs: Prentice-Hall, Inc., 1956.	12.96
<u>Surveying Practice: The Fundamentals of Surveying</u> . Philip Kissam. New York: McGraw-Hill Book Company, 1966.	12.40
<u>Surveying Practice: The Fundamentals of Surveying</u> , 2nd Edition. Philip Kissam. New York: McGraw-Hill Book Company, 1971.	12.10
<u>Technical Descriptive Geometry</u> , 2nd Edition. B. Leighton Wellman. New York: McGraw-Hill Book Company, 1957.	12.60
<u>Technical Drawing</u> , 6th Edition, Frederick E. Glesecke, Alva Mitchell, Henry C. Spencer, and Ivan L. Hill. New York: Macmillan Publishing Co., Inc., 1974.	12.33
<u>Technical Mathematics with Calculus</u> , 2nd Edition. Harold S. Rice and Raymond M. Knight. New York: McGraw- Hill Book Company, 1966.	10.63

TABLE 28

READABILITY LEVELS OF BOOKS IN
DRAFTING AND DESIGN

<u>No. of Books</u>	<u>Readability Range</u>	<u>Mean</u>
32	10.63 - 13.70	12.70

The technical area of Drafting and Design is one of two of the 16 vocational/technical areas included in this study employing over 30 different texts in basic instruction. The mean reading level for these students and the mean readability level of the texts used in instruction are significantly closer than in all other vocational/technical areas reported in this study. This difference is approximately one year. However, the range of reading levels is represented by a 6.0 - 15.0 range. None of the 32 texts has a reading level below the tenth grade.

TABLE 29

READING LEVELS OF STUDENTS IN
ELECTRONICS TECHNOLOGY

No. of Students	Reading Range	Mean
76	6.0 - 15.0	11.70

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
Basic Electricity: A Text-Lab Manual, 4th Edition. Paul B. Zbar. New York: McGraw-Hill Book Company, 1974.	13.33
Basic Electronics, 3rd Edition. Bernard Grob. New York: McGraw-Hill Book Company, 1971.	14.23

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Communication Electronics for Technicians.</u> Lloyd Temes. New York: McGraw-Hill Book Company, 1974.	12.13
<u>Communications Electronics Circuits,</u> 2nd Edition. J. J. DeFrance. San Francisco: Rinehart Press, 1972.	13.63
<u>Digital Computer Fundamentals,</u> 2nd Edition. Thomas C. Bartee. New York: McGraw-Hill Book Company, 1966.	14.20
<u>Electrical and Electronics Drawing,</u> 3rd Edition. Charles J. Baer. New York: McGraw-Hill Book Company, 1973.	12.96
<u>Electrical Principles and Practices,</u> 2nd Edition. James E. Adams. New York: McGraw-Hill Book Company, 1973.	13.06
<u>Electronic Devices and Circuit Theory.</u> Robert Boylestad and Louis Nashelsky. Englewood Cliffs: Prentice-Hall, Inc., 1972.	13.06
<u>Electronic and Electrical Fundamentals,</u> Volume III: Vacuum Tube and Semiconductor Fundamentals. PHILCO TechRep Division Publications.	13.30
<u>Electronic Principles.</u> Albert Paul Malvino. New York: McGraw-Hill Book Company, 1973.	14.00
<u>Elementary Principles of Laboratory Instruments,</u> 3rd Edition. Leslie W. Lee. St. Louis: The C. V. Mosby Company, 1974.	13.70
<u>Essentials of Electricity--Electronics.</u> Morris Slurzberg and William Osterheld. New York: McGraw-Hill Book Company, 1965.	13.16
<u>Fundamentals of Electronic Devices.</u> Merrill's International Series in Electrical and Electronics Technology. Samuel L. Oppenheimer, Consulting Editor.	13.70

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Industrial Electronics</u> , Allan Lytel. New York: McGraw-Hill Book Company, 1962.	13.60
<u>Industrial, Labor and Community Relations</u> . Merle E. Strong. Albany: Delmar Publishers, Inc., 1969.	14.00
<u>Introduction to Electronic Amplifiers</u> . Rodney B. Faber. Columbus, Ohio: Charles E. Merrill Publishing Company, 1971.	12.73
<u>Introductory Applied Physics</u> , 3rd Edition. Norman C. Harris and Edwin M. Hemmerling. New York: McGraw-Hill Book Company, 1972.	13.60
<u>Pulse and Logic Circuits</u> . Angelo C. Gillie. New York: McGraw-Hill Book Company, 1968.	13.33
<u>Schaum's Outline of Theory and Problems of Descriptive Geometry</u> . Schaum's Outline Series. Minor Clyde Hawk, New York: McGraw-Hill Book Company, 1962.	12.00
<u>Semiconductor Pulse Circuits with Experiments</u> . Brinton B. Mitchell. San Francisco: Rinehart Press, 1970.	12.86
<u>Transistor and Integrated Electronics</u> , 4th Edition. Milton S. Kiver. New York: McGraw-Hill Book Company, 1972.	13.20
<u>Writing and Reading in Technical English</u> . Nell Ann Pickett and Ann A. Laster. San Francisco: Canfield Press, 1970.	12.76

TABLE 30
READABILITY LEVELS OF BOOKS IN
ELECTRONICS TECHNOLOGY

No. of Books	Readability Range	Mean
22	12.00 - 14.23	13.30

The average readability level of books employed in instruction in the technical area of Electronics Technology is approximately 1½ years higher than the average reading level of students in this area. Although students' reading levels range from 6.0 - 15.0, readability levels for the texts used in instruction begin at 12.00.

TABLE 31
READING LEVELS OF STUDENTS IN
SECRETARIAL SCIENCE

No. of Students	Reading Range	Mean
111	6.3 - 15.0	10.67

The following is a list of the textbooks, accompanied by the individual mean readability level of each, used in the junior colleges at the time of data collection for this study.

<u>Textbook</u>	<u>Mean Readability Level</u>
ABC Shorthand: Stenoscript, Manuel C. Avancena.	12.33
Accounting Fundamentals, 2nd Edition, Noble Fritz and Frank Hoffman. New York: McGraw-Hill Book Company.	13.76
Business Communications: Principles and Methods, 4th Edition. William C. Himstreet and Wayne Murlin Baty. Belmont, California: Wadsworth Publishing Company, Inc., 1973.	13.70

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Business: Its Nature and Environment,</u> <u>An Introduction, 7th Edition. Raymond E.</u> <u>Glos and Harold A. Baker. Cincinnati:</u> <u>South-Western Publishing Company, 1972.</u>	13.56
<u>Business Mathematics for Colleges, 5th</u> <u>Edition. Louis A. Rice, Alfred C. Boyd,</u> <u>and F. Blair Mayne. Cincinnati: South-</u> <u>Western Publishing Company.</u>	12.10
<u>Charm: The Career Girl's Guide to</u> <u>Business and Personal Success, 2nd</u> <u>Edition. Helen Whitcomb and Rosalind</u> <u>Lang. New York: McGraw-Hill Book</u> <u>Company, 1971.</u>	12.23
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<u>Gregg Shorthand for Colleges, Volume One,</u> <u>Diamond Jubilee Series. Louis A. Leslie,</u> <u>Charles E. Zoubek, and Russell J. Hosler.</u> <u>New York: McGraw-Hill Book Company, 1965.</u>	12.56

<u>Textbook</u>	<u>Mean Readability Level</u>
<u>Gregg Shorthand for Colleges, Volume Two, Diamond Jubilee Series.</u> Louis A. Leslie, Charles E. Zoubek, and Russell J. Hosler. New York: McGraw-Hill Book Company, 1965.	13.00
<u>How to Use Business Machines, 3rd Edition.</u> Harold D. Fasnacht, Harry B. Bauernfeind, and Donald W. Vigen. New York: McGraw-Hill Book Company.	12.30
<u>Modern Business English: A Text-Workbook for Colleges, 5th Edition.</u> Kate M. Monro and Mary Alice Wittenberg. New York: McGraw-Hill Book Company, 1972.	13.20
<u>Office Machines Course: Adding and Calculating Machines, 4th Edition.</u> Nicholas J. Cornelia, William R. Paseward, and Peter L. Agnew. Cincinnati: South-Western Publishing Company, 1971.	13.26
<u>Practical Business Correspondence for Colleges, 3rd Edition.</u> Mary Robertson and Charles F. Walker. Cincinnati: South-Western Publishing Company, 1966.	12.80
<u>Principles of Cost Accounting, 5th Edition.</u> Robert E. Schmiedicke and Charles F. Nagy. Cincinnati: South-Western Publishing Company, 1973.	13.40
<u>Production Typing: A Collegiate Course.</u> Ethel T. Bendixen and Juanita E. Carter. Cincinnati: South-Western Publishing Company, 1967.	12.33
<u>Progressive Filing, 8th Edition.</u> Gilbert Kahn, Theodore Yerian, and Jeffrey R. Stewart, Jr. New York: McGraw-Hill Book Company, 1969.	11.93
<u>Records Management: A Collegiate Course in Filing Systems and Procedures.</u> Mina M. Johnson and Norman F. Kallaus. Cincinnati: South-Western Publishing Company, 1967.	13.70

<u>Textbook</u>	<u>Mean Readability Level</u>
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<u>Secretarial Procedures and Administration,</u> 6th Edition. J. Marshall Hanna, Estelle L. Popham, and Rita Sloan Tilton. Cincinnati: South-Western Publishing Company, 1973.	13.26
<u>Shorthand Dictation Studies,</u> 3rd (Jubilee) Edition. Wallace B. Bowman and Mary Ellen Oliverio. Cincinnati: South-Western Publishing Company, 1966.	12.36
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<u>Typing 75: Advanced,</u> 3rd Edition. Alan C. Lloyd, John L. Rowe, and Fred E. Winger. New York: McGraw-Hill Book Company, 1970.	12.50
<u>Typing 75: Basic,</u> 3rd Edition. Alan C. Lloyd, John L. Rowe, and Fred E. Winger. New York: McGraw-Hill Book Company, 1970.	11.56
<u>Typing 75: Professional,</u> 3rd Edition. Alan C. Lloyd, John L. Rowe, and Fred E. Winger. New York: McGraw-Hill Book Company, 1971.	12.46

TABLE 32
READABILITY LEVELS OF BOOKS IN
SECRETARIAL SCIENCE

No. of Books	Readability Range	Mean
28	11.56 - 13.76	12.73

The 111 students enrolled in Secretarial Science have a reading range that spans approximately 8½ grade levels from 6.3 - 15.0. This range produces a mean of 10.67. However, the mean readability level for the books employed in instruction is 12.73. None of the books has a readability level below 11.56.

CHAPTER III

SUMMARY AND CONCLUSIONS

Mean reading levels of students enrolled in the 16 vocational/technical areas at junior colleges in Mississippi selected for this study vary from 1 to 4 grade levels from the mean readability levels of texts used in instructing these students. All of the texts measured by the readability formula indicate reading levels above the 10.63 level.

Conclusions

1. The mean reading level of the students enrolled in Auto Body and Fender repair was 8.72, and the mean readability level of the textbooks used in Auto Body and Fender Repair was 13.55.
2. The mean reading level of the students enrolled in Auto Mechanics was 8.57, and the mean readability level of the textbooks used in Auto Mechanics was 13.12.
3. The mean reading level of the students enrolled in Farm Equipment was 9.99, and the mean readability level of the textbooks used in Farm Equipment was 13.40.
4. The mean reading level of the students enrolled in Heating, Refrigeration, and Air Conditioning was 9.25, and the mean readability level of the textbooks used in Heating, Refrigeration, and Air Conditioning was 13.16.

5. The mean reading level of the students enrolled in Industrial Electricity was 10.30, and the mean readability level of the textbooks used in Industrial Electricity was 13.13.

6. The mean reading level of the students enrolled in Machine Shop was 9.33, and the mean readability level of the textbooks used in Machine Shop was 12.70.

7. The mean reading level of the students enrolled in Practical Nursing was 10.16, and the mean readability level of the textbooks used in Practical Nursing was 12.81.

8. The mean reading level of the students enrolled in Radio and T.V. Repair was 9.74, and the mean readability level of the textbooks used in Radio and T.V. Repair was 13.23.

9. The mean reading level of the students enrolled in Sheet Metal was 10.08, and the mean readability level of the textbooks used in Sheet Metal was 12.17.

10. The mean reading level of the students enrolled in Welding was 9.18, and the mean readability level of the textbooks used in Welding was 13.14.

11. The mean reading level of the students enrolled in Cosmetology was 10.27, and the mean readability level of the textbooks used in Cosmetology was 13.31.

12. The mean reading level of the students enrolled in Data Processing was 11.74, and the mean readability level of the textbooks used in Data Processing was 13.65.

13. The mean reading level of the students enrolled in Distribution and Marketing was 11.30, and the mean readability

level of the textbooks used in Distribution and Marketing was 13.40.

14. The mean reading level of the students enrolled in Drafting and Design was 11.77, and the mean readability level of the textbooks used in Drafting and Design was 12.70.

15. The mean reading level of the students enrolled in Electronics Technology was 11.70, and the mean readability level of the textbooks used in Electronics Technology was 13.30.

16. The mean reading level of the students enrolled in Secretarial Science was 10.67, and the mean readability level of the textbooks used in Secretarial Science was 12.73.

17. The discrepancy between the vocational mean reading ability level of 9.53 and the 13.04 mean readability level of the texts is 3.51 levels.

18. The technical areas' mean reading ability level of 11.24 is 1.94 levels lower than the 13.18 mean readability level for texts in those areas.

19. Overall, the vocational areas indicated a 1.57 larger discrepancy than the technical areas. The largest discrepancy in the vocational areas occurred in Auto Body and Fender Repair with a 4.55 difference between the mean reading level of students and the mean readability level of texts. The smallest discrepancy occurred in the Sheet Metal area with a 2.09 difference.

20. There was less discrepancy in the technical areas. The .93 difference between mean readability level and mean

reading level in Drafting and Design was the smallest discrepancy in the total technical area.

APPENDICES

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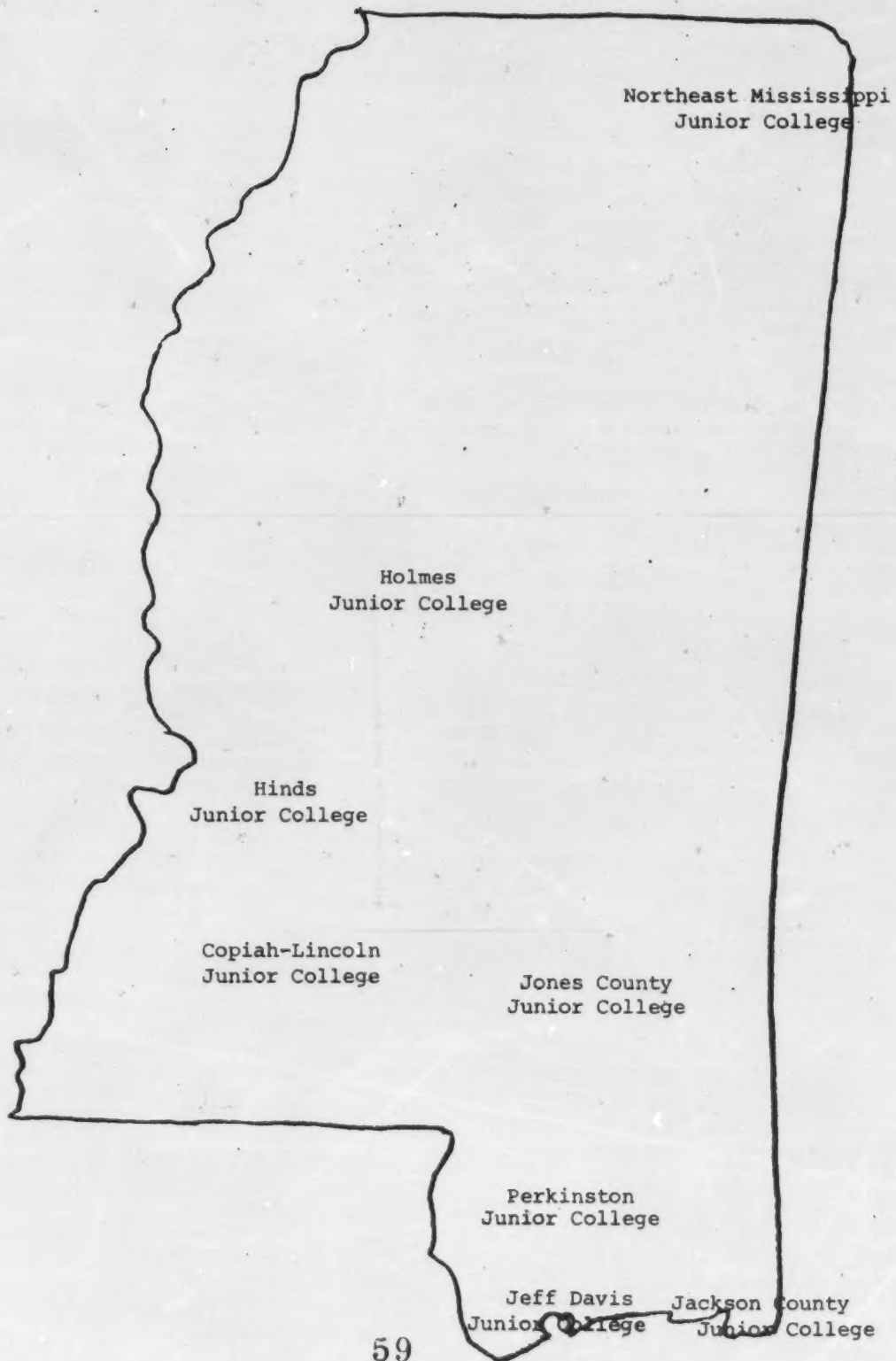
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APPENDIX A
LOCATION MAP

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LOCATION MAP



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APPENDIX B

VOCATIONAL/TECHNICAL AREAS TESTED AT
EACH PARTICIPATING JUNIOR COLLEGE

VOCATIONAL/TECHNICAL AREAS TESTED AT
EACH PARTICIPATING JUNIOR COLLEGE

Junior College	Areas
Copiah-Lincoln Junior College	Auto Mechanics Cosmetology Data Processing Distribution and Marketing Drafting and Design Electronics Technology Heating, Refrigeration, and Air Conditioning Machine Shop Practical Nursing Secretarial Science Welding
Hinds Junior College	Auto Body and Fender Repair Auto Mechanics Data Processing Distribution and Marketing Drafting and Design Electronics Technology Farm Equipment Heating, Refrigeration, and Air Conditioning

Junior College	Areas
Hinds Junior College Continued	Industrial Electricity Machine Shop Radio and T.V. Repair Secretarial Science Sheet Metal Welding
Holmes Junior College	Auto Mechanics Cosmetology Data Processing Electronics Technology Heating, Refrigeration, and Air Conditioning Machine Shop Practical Nursing Secretarial Science Welding
Jones County Junior College	Auto Mechanics Data Processing Distribution and Marketing Drafting and Design Electronics Technology Farm Equipment Heating, Refrigeration, and Air Conditioning

Junior College	Areas
Jones County Junior College Continued	Machine Shop Practical Nursing Radio and T.V. Repair Secretarial Science Welding
Mississippi Gulf Coast Junior College Jackson County	Auto Mechanics Drafting and Design Electronics Technology Machine Shop Practical Nursing Secretarial Science Sheet Metal Welding
Mississippi Gulf Coast Junior College Jefferson/Davis	Data Processing Distribution and Marketing Heating, Refrigeration, and Air Conditioning
Northeast Mississippi Junior College	Auto Body and Fender Repair Auto Mechanics Data Processing Distribution and Marketing Drafting and Design Electronics Technology

Junior College
Northeast Mississippi
Junior College
Continued

Areas
Heating, Refrigeration, and Air
Conditioning
Machine Shop
Practical Nursing
Radio and T.V. Repair
Secretarial Science
Welding

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